

Claims

1. A monitor for monitoring a user's heart, comprising;
  - 5 a support means for securing the monitor in position for sensing the user's heart beat, the support means being for attachment to a single adhesive ECG electrode both to support the monitor and for receiving electrical signals from the ECG electrode;
  - 10 a means for electrically coupling the monitor to a second ECG electrode for receiving signals therefrom;
  - 15 a cardiac sensor for receiving signals from the ECG electrodes, and
  - 20 a processor coupled to the cardiac sensor for generating cardiac data.
2. A monitor according to claim 1, in which the coupling means comprises an electrical lead extending from a housing of the monitor or a socket in the housing of the monitor for receiving an electrical lead.
3. A monitor according to claim 1 or 2, in which the single adhesive ECG electrode is a standard ECG electrode.
- 20 4. A monitor according to any preceding claim, in which the maximum lateral dimension of the ECG electrode is 55mm or less.

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5. A monitor according to any preceding claim, in which the maximum lateral dimension of the monitor is 35mm or less.
6. A monitor according to any preceding claim, in which 5 the maximum lateral dimension of the monitor is less than or equal to the maximum lateral dimension of the ECG electrode.
7. A monitor according to any preceding claim, in which 10 the monitor, in use, does not extend beyond an outer edge of the ECG electrode.
8. A monitor according to any preceding claim, in which the weight of the monitor is less than 50 grams.
9. A monitor according to any preceding claim, 15 comprising a memory coupled to an output of the processor for storing the cardiac data.
10. A monitor according to any preceding claim, in which the processor generates inter-beat interval data from signals it receives from the cardiac sensor.
11. A monitor according to any preceding claim, further 20 comprising an accelerometer coupled to the processor, so that the processor can generate movement data.
12. A monitor according to claim 11, in which the processor processes signals it receives from the cardiac sensor according to a predetermined parameter 25 in order to generate the cardiac data and modifies that parameter in response to signals it receives from the accelerometer.

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- 5 13. A monitor according to claim 11 or 12, in which a parameter, such as a gain parameter or a threshold voltage, used in deriving the cardiac data from an output of the cardiac sensor is variable in response to an output from the accelerometer or a movement or activity parameter derived therefrom.
- 10 14. A monitor according to any preceding claim, comprising contacts for making electrical contact with two ECG electrodes, in which the same contacts are couplable to an interface for transferring data from and/or to the monitor, and/or for resetting or reprogramming the monitor, and/or for recharging a battery for powering the monitor.
- 15 15. A monitor according to any of claims 11 to 13, in which the monitor in use is secured to the chest or torso of the user so that the accelerometer is oriented to sense vertical movements of the user's chest or torso.
- 20 16. A monitor according to any preceding claim, which is of small size and weight so as to be comfortable for a user to wear for extended data sampling periods.
- 25 17. A method for monitoring a user's heart, comprising the steps of;  
sensing the user's heart beat by using a cardiac sensor secured to the user's body by means of a single ECG electrode;  
processing cardiac signals to generate cardiac data; and

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storing or displaying the data.

18. A method according to claim 12, comprising the step of sensing movement of the cardiac sensor and processing movement signals to generate movement data.
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19. A monitor for monitoring a user's heart beat substantially as described herein with reference to the drawings.
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20. A monitor for monitoring a user's heart beat and movement substantially as described herein with reference to the drawings.
21. A method for monitoring a user's heart beat substantially as described herein with reference to the drawings.
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22. A method for monitoring a user's heart beat and movement substantially as described herein with reference to the drawings.